

1 IN THE CLAIMS

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3 --1. (Amended) An apparatus for transporting ions from an ionization source region to a first
4 pressure region within a mass spectrometer, wherein said apparatus comprises:

5 first and second capillary sections each having an inlet end and an outlet end; and

6 a union having first and second openings, said union configured to removably interface said

7 first capillary section to said [and] second capillary section[s] such that ions may

8 be delivered from said source region into said first pressure region [mass

9 spectrometer];

10 wherein said union comprises a sealing mechanism for sealing the connection between said
11 ionization source region and said first pressure region of said mass spectrometer.

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13 2. (Original) An apparatus according to claim 1, wherein said first section comprises a channel having
14 a helical structure.

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16 3. (Original) An apparatus according to claim 1, wherein said union comprises means for removably
17 securing said ends of said first and second sections.

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19 4. (Original) An apparatus according to claim 1, wherein said union comprises means for providing an
20 airtight seal between said ends of said first and second sections within said union.

1 5. **(Original)** An apparatus according to claim 1, wherein said inlet ends and said outlet ends comprise
2 conductive end caps.

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4 6. **(Previously presented)** An apparatus according to claim 1, wherein said apparatus maintains
5 pressure conditions in said first pressure region of said mass spectrometer.

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7. **(Previously presented)** An apparatus according to claim 1, wherein said ionization source is an API
8 source.

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10 8. **(Previously presented)** An apparatus according to claim 1, wherein said ionization source is an ESI
11 device.

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13 9. **(Previously presented)** An apparatus according to claim 1, wherein said ionization source is a
14 pneumatic assisted electrospray source.

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16 10. **(Previously presented)** An apparatus according to claim 1, wherein said ionization source is an
17 electron impact source.

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19 11. **(Previously presented)** An apparatus according to claim 1, wherein said ionization source is a
20 chemical ionization source.

1 12. **(Previously presented)** An apparatus according to claim 1, wherein said ionization source is a
2 matrix assisted laser desorption ionization source.

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4 13. **(Previously presented)** An apparatus according to claim 1, wherein said ionization source is a
5 plasma desorption source.

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7 *B1 Cont'd*
8 14. **(Previously presented)** An apparatus according to claim 1, wherein said ionization source uses
9 liquid chromatography.

10 15. **(Original)** An apparatus according to claim 1, wherein said apparatus is used to multiplex sample
11 materials.

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13 16. **(Amended)** A system for performing mass spectrometric analysis, wherein said system
14 comprises:

15 at least one ion source for producing ions;

16 a mass spectrometer having an inlet orifice configured to accept the ions; and

17 a multiple part capillary device configured to provide a removable interface between said

18 ion source and a first vacuum region of said mass spectrometer;

19 wherein said removable interface maintains pressure conditions of said mass spectrometer.
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1 17. **(Original)** A system according to claim 16, wherein said multiple part capillary device comprises:
2 a first capillary section including an inlet orifice for accepting ions from said ion source;
3 a union for connecting to at least said first capillary section;
4 a second capillary section connected to said union; and
5 a sealing mechanism for sealing said removable interface between said ion source and said
mass spectrometer.

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8 18. **(Original)** A system according to claim 17, wherein at least one of said first and second capillary
9 sections comprises a channel having a helical structure.
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11 19. **(Original)** A system according to claim 17, wherein at least one of said first and second capillary
12 sections is insulating.
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14 20. **(Original)** A system according to claim 17, wherein at least one of said first and second capillary
15 sections is metallic.
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17 21. **(Original)** A system according to claim 17, wherein at least one of said first and second capillary
18 sections comprises a flexible tube.
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20 22. **(Original)** A system according to claim 17, wherein at least one of said first and second capillary
21 sections comprises a heated capillary tube.

23. **(Original)** A system according to claim 16, wherein said at least one ion source is selected from the group consisting of an electrospray ion source, an atmospheric pressure ionization source, a matrix-assisted laser desorption/ionization ion source, a pneumatic assisted electrospray source, an electron impact source, a chemical ionization source, a plasma desorption source and a liquid chromatography source.

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24. **(Original)** A system according to claim 16, wherein said mass spectrometer is selected from the group consisting of a quadrupole mass spectrometer, a time-of-flight mass spectrometer, an ion trap mass spectrometer, an ion cyclotron resonance mass spectrometer, and a magnetic sector mass spectrometer.

25. **(Amended)** A method for performing mass analyses using at least one mass spectrometer, wherein said method comprises the steps of:

generating ions in an ion source region;

providing a multiple part capillary having a removable interface between said ion source region and a first pressure region of said mass spectrometer while maintaining pressure conditions of said first pressure region of said mass spectrometer;

delivering said ions from said ion source region into a first pressure region of said at least one mass spectrometer via said [a] multiple part capillary device [for providing a removably interface between said ion source region and said mass spectrometer while maintaining pressure conditions of said first pressure region of said mass spectrometer]; and

performing at least one mass analysis on said ions in said at least one mass spectrometer.

26. **(Original)** A method according to claim 25, wherein said ions are generated in said ion source region using a source selected from the group consisting of an electrospray ion source, an atmospheric pressure ionization source, a matrix-assisted laser desorption/ionization ion source, a pneumatic assisted electrospray source, an electron impact source, a chemical ionization source, a plasma desorption source and a liquid chromatography source.

27. **(Original)** A method according to claim 25, wherein said mass analysis is performed using a mass analyzer selected from the group consisting of a quadrupole mass analyzer, a time-of-flight mass analyzer, an ion trap mass analyzer, an ion cyclotron resonance mass analyzer, and a magnetic sector mass analyzer.--